

2006 STP/CMAQ Regional Competition Application

This application is available on the PSRC Web site at <http://www.psrc.org/projects/tip/index.htm>.

Puget Sound Regional Council

****Please read all of the text in this section before completing this application.****

Important notice: The importance of complete and accurate information on every application cannot be overemphasized. The evaluation and scoring of all submitted projects will be based on the answers provided in this application. A project's suitability for regional funding may be compromised if the application is found to have omissions or inaccuracies. In addition, sponsors of projects recommended for funding as a result of the competition should be aware that their application could be used in the future to evaluate the status of a project if it fails to comply with the requirements of the Puget Sound Regional Council's (PSRC) Project Tracking program.

Projects receiving funding as a result of this competition: Funding distributed as a result of the 2006 STP/CMAQ Regional Competition is awarded to projects of regional priority, not to the sponsoring agency itself. Sponsors of projects that receive funds from this competition will be required to submit a more detailed TIPMOD or TIPNEW application, which will be due to the PSRC on July 21 2006. Please note that these sponsors will also be asked to certify that they will comply with the conditions of the PSRC's Project Tracking Program, as a condition of accepting regional funding. Failing to comply with this condition, and/or with the conditions established in the PSRC's Project Tracking Program, may eventually result in the loss and/or transfer of funds to another regional priority project.

CMS requirements: Per revisions to the PSRC's Congestion Management System [in accordance with Title 23, Section 134.(i)(3) USC – Highways], sponsors of projects that receive funds as a result of this competition will be required to document the purpose and need for any project that provides general purpose capacity expansion on minor arterials or major/minor collectors (urban or rural).

14-page limit: You may use additional pages if necessary; however, please be as brief as possible and limit your application to a total of fourteen (14) pages, plus map(s) and/or other required supporting documents.

E-mail submissions are preferred: Attach your completed application to an e-mail and send to TIPRPEC@psrc.org. Please name the file "(Agency): (Project title)". If you are unable to e-mail the application, please mail a copy of the electronic file on diskette, and fax or mail a corresponding paper copy. Electronic copies of all applications are required, as they will be posted to the PSRC's Web site. Mailed materials should be sent to: Larry Burris, Puget Sound Regional Council, 1011 Western Avenue Ste 500, Seattle, WA 98104-1035 and/or faxed to 206-587-4825, Attn: Larry Burris. For questions or to confirm receipt of your application, contact Larry Burris at 206-464-5301 or lbarris@psrc.org. All applications must be submitted by **May 1, 2006**.

Definition of a project: For the purposes of this competition, a project must be clearly defined by geographic limits and/or functionality. If the project contains multiple components, the sponsor must clearly indicate how they are logically connected to one another. A project with multiple geographic locations must demonstrate their functional relationship (for example, signal coordination work in various locations tied together through a traffic control center). **Note: a project may request only one funding source – either STP or CMAQ, but not both.** If you have questions please contact Kelly McGourty at 206-464-7892 or kmcgourty@psrc.org.

PROJECT DESCRIPTION INFORMATION

1	Project title: Intelligent Transportation System Corridor Improvements (Redmond, Totem Lake and Kent Areas) For roadway project titles: list facility name, limits, and any other identifying words. E.g., SR-520 HOV (104th Ave NE to 124th Ave NE).
2	Destination 2030 ID#: In order to be eligible for federal funding, a project must be in, or consistent with, <i>Destination 2030</i> , the region's Metropolitan Transportation Plan (MTP). To confirm if your project is specifically listed in <i>Destination 2030</i> , refer to Appendix 9 of <i>Destination 2030</i> at http://www.psrc.org/projects/mtp/d2030plan.htm . For assistance or questions regarding these issues, contact Kaori Fujisawa at 206-587-5063 or kfujisawa@psrc.org .

3	<p>a. Sponsoring agency: King County</p> <p>b. Co-sponsor(s) if applicable: Important: For the purposes of this application and competition, "co-sponsor" refers to any agency that would receive a portion of the funding if the requested grant were to be awarded.</p> <p>c. Does sponsoring agency have "Certification Acceptance" status from WSDOT? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>d. If not, which agency will serve as your CA sponsor?</p>
4	<p>Project contact person: Peter Heffernan</p> <p>Address: 201 South Jackson Street, Seattle WA. 98104</p> <p>Phone: (206) 624-6612</p> <p>Fax: (206) 624-2616</p> <p>E-Mail: peter.heffernan@metrokc.gov</p>

Project description.

King County in coordination with the Cities of Redmond, Kirkland, Kent, Federal Way, and Woodinville is striving to address congestion and improve traffic flow along several key corridors in east and south King County. The corridors proposed to receive ITS improvements are all high volume arterials that function as connecting corridors to a Regional Growth Centers and/or Economic Center per the PSRC guidelines. ITS improvements to these connecting corridors will improve travel time to and from the centers allowing for employees and customers to live in developing areas throughout King County.

The project includes installation of high-speed fiber optic interconnect and optimization of traffic signals, upgrade of control systems, and provides for high speed communication between the transportation management centers of the Cities Kent, Redmond, King County and WSDOT. This project will have immediate impact to the 277th/272nd, Avondale Rd, 100th Ave NE and Juanita-Woodinville corridors and expand the number of cities and corridors connected to the regional ITS system. It will also lay the groundwork for more advanced traffic operations such as adaptive traffic control and/or shared operation of corridors, better incident management and quicker incident response among the partnering jurisdictions and other jurisdictions in the region.

The project has a direct connection to previously funded ITS projects. The ITS projects that are either in design or have been constructed have developed and installed the ITS foundation to communicate between the corridors and the King County Traffic Control Center (KCTCC). These funded ITS corridor projects are designed to accommodate additional ITS corridors and devices allowing for expansion of the system in a cost effective manner. The ITS groundwork previously developed includes fiber optic cable, fiber optic communication hubs and ITS communication equipment. Expansion of an existing system provides additional benefits to the ITS corridors, by allowing for signal coordination and incident management between adjacent and parallel corridors.

King County completed the King County ITS Strategic Plan in August of 2005. This plan analyzes ITS needs within King County on arterial roads, prioritizing project by measures such as traffic volumes, accident history, volume to capacity ratio of the corridor, transit ridership and proximity to existing ITS projects and infrastructure. The ITS Strategic Plan gives King County guidance for ITS installation needs and provides a project list for implementation ranked as high, medium or low priority. The four sub-projects included in this application are high priority projects that rank numbers 1, 2, 3 and 5 in project priority in the King County ITS Strategic Plan. The sub-projects include: 100th Ave NE ITS, Juanita-Woodinville Way/NE 160th St. ITS, South 272nd/277th Street ITS, and Avondale Road ITS.

100th Ave NE ITS

100th Ave NE is a principal arterial carrying 24,000 vehicles per day north of Kirkland. This arterial route is congested in the peak hours and includes 2 high accident locations and a section of high accident roadway. King County will replace traffic signals controllers and cabinets with a 2006 signal maintenance project throughout the corridor. The 2006 project does not include high-speed communication, CCTV cameras or data stations. The 100th Ave ITS project will improve travel time and safety by providing a communication link between the King County TCC and the corridor. This will allow for remote operation of the corridor during an incident or emergency either on 100th Ave NE or I-405 rerouting traffic to the 100th Ave NE corridor.

The 100th Ave NE ITS project will install fiber to interconnect signals and new video cameras between NE 132nd St. and NE 145th St. and provide a high-speed connection back to King County's traffic control center (KCTCC). This is a high use transit route and the signals will be equipped with Transit Signal Priority equipment. This corridor improvement will require coordination between King County and the Cities of Kirkland and Kenmore due to annexation activity in the area and because the corridor continues with high volumes of traffic into these jurisdictional boundaries. The 100th Ave NE ITS project received FY05 TEA-21 funding.

100th Ave NE provides connection from the north and west via NE 124th St. and NE 132nd St. to the Totem Lake Urban Center. This corridor provides access for commuters and customers from Kenmore and unincorporated King County residential areas north and east of Kirkland to the center. With the completion of the 100th Ave NE and Juanita-Woodinville/NE 160th St. ITS corridors and the connection to the NE 124th St. ITS project, completed May, 2005, King County will have remote access to the signal on all three corridors, as well as NE 132nd. This will allow for synchronized operation, improved incident response and remote signal timing revisions to clear the congestion and reroute traffic, thereby reducing the occurrence of secondary accidents due to queuing of vehicles.

King County partnering with the City of Kirkland and WSDOT completed the NE 124th St. ITS project in May 2005. The NE 124th St. project provided high-speed communication between King County TCC and the NE 124th St. corridor. The NE 124th St. ITS corridor extends from 100th Ave NE to SR 202. King County is currently operating the corridor. 100th Ave NE and Juanita-Woodinville/NE 160th St. ITS projects will tie into King County's NE 124th St. ITS project, utilizing the fiber optic communication between the NE 124th St. ITS corridor and King County, City of Kirkland and WSDOT traffic management centers.

Juanita-Woodinville Way/NE 160th St. ITS

Juanita-Woodinville Way/NE 160th St. is a minor arterial that carries over 25,000 vehicles per day. This arterial route has high transit use with access to the Brickyard Park and Ride. The signal controllers will be equipped to run transit signal priority (TSP) and evaluated for TSP by the Metro Transit Division. This is a high accident roadway per King County accident rate analysis. The analysis shows that accidents could be reduced by 15% with signal interconnection and synchronization. Intersections in the area of I-405 function at LOS F due to intersection spacing and the proximity to the I-405 ramps. Interconnecting the King County and WSDOT signals and providing signal synchronization through that corridor will improve travel times for commuters and transit users.

The Juanita-Woodinville/NE 160th St. ITS project is a joint project between King County and WSDOT with additional coordination between King County and the City of Woodinville. This project will install fiber optic cable along Juanita-Woodinville Way and NE 160th St. between 100th Ave NE and 124th Ave NE. The fiber will be used for high-speed connection between the corridor and King County TCC, WSDOT TMC, with a feed to the City of Woodinville. The signal controllers, new video cameras, and new data stations will send data and video to the King County TCC and WSDOT over fiber cable via the 100th Ave NE ITS project and a potential connection into the WSDOT fiber along I-405 at the NE 160th St. ramps. The Juanita-Woodinville/NE 160th St. ITS project received FY05 TEA-21 funding.

The ability to remotely operate the corridor will reduce accidents by improving incident response time for emergency vehicles, provide signal timing revisions to clear the congestion and reroute traffic, thereby reducing the occurrence of secondary accidents. This project will be connected to the 100th Ave NE and NE 124th St. ITS projects. This interconnection between routes allows the operator the ability to change signal timing for rerouting of traffic from one corridor to the other in the event of an emergency.

South 272nd/277th Street ITS

S 272nd/277th Street is a principal arterial that carries approximately 33,000 vehicles per day. This corridor contains two high accident locations and one high accident roadway section. This ITS project will improve travel times through the corridor by 14% in the build out year allowing for more reliable and efficient travel flows. Accidents along the corridor will decrease due to a reduction in vehicle stops and improved vehicle progression through the corridor. It is anticipated that the cost savings attributed to reduced accidents is approximately \$900,000 annually. This is based on the ITS project interconnecting and modifying signals throughout the 272nd/277th Street corridor.

The S. 272nd/277th St. ITS project will interconnect 10 signals with fiber optic cable and install CCTV video cameras and data stations along 272nd/277th Street between 55th Ave S and SR 99. This project will equip signals for Transit Signal Priority due to it's proximity to the Star Lake Park and Ride lot. By extending fiber optic cable to the SR 99 corridor, this project will enable future ITS integration with the Cities of SeaTac, Federal Way and Des Moines.

S 272nd/277th Street is a direct east/west arterial route providing access to and from the Kent Industrial Center and Auburn Urban Center from I-5 and SR 99. It also carries traffic to/from SR 167 and I-5 to the City of Federal Urban Center via SR 99. Federal Way currently employs 4240 people. The target employment for the regional growth center is 10,450 with housing units at 3,135. There are two arterial routes that provide direct access to the center, one being SR 99 and the other SE 320th St. The 272nd/277th ITS project will improve access to the center from the north and east via SE 272nd and SR 99.

The Kent Manufacturing Industrial Center has very little housing and employs over 16,000 people. The majority of employment is in wholesale, transportation, communication, utilities and manufacturing. These industries have large amounts of truck and commuter traffic and not as much consumer traffic. The South 272nd/277th Street corridor provides access to I-5, SR 99, and SR 167 for traffic traveling to/from the south. Future ITS deployment will include connection between the traffic management centers and freight management centers to share data and incident information. This project will be equipped to provide such information when this communication connection is implemented.

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Avondale Road ITS

Avondale Road is a highly congested arterial that is currently carrying 33,000 vehicles per day north of Novelty

Hill Road. Forecast volumes for 2010 show 50,000 average daily trips south of the Novelty Hill Road intersection with approximately 20,000 traveling to/from Redmond center and 30,000 onto SR 520. Redmond center employed 5800 people in 2000 and is projecting employment of over 10,000 per the *vision 2020* plan. The population of Redmond center is projected at 7,000 people. 36% of the employment is retail and another 31% services. With the above employment and residential information, it is apparent that travel to and from the center from outlying areas is critical. The majority of the employees will commute from areas outside the center and the retail/service industry will rely on those living outside of the center as well.

The Avondale Road ITS project will upgrade, interconnect and synchronize signals along Avondale Road between Novelty Hill Road and Woodinville Duvall Road. The project will continue into the City of Redmond via Avondale Road and Cleveland Street. This project includes fiber connection throughout the corridor and cameras at major intersections and high accident locations. This project will include installation of volume count systems at key signalized intersections, as well as data collection stations at mid-block locations. The project will connect into the Avondale/Novelty Hill ITS project that is funded and to be constructed in late 2006.

With the completion of the Avondale Road ITS and Avondale/Novelty Hill Road ITS signals will be monitored, synchronized and interconnected along Avondale from the Redmond Urban Center and SR 520 to Woodinville-Duvall Road and along Novelty Hill Road between Avondale Road and 208th Ave NE. The combination of these projects and the WSDOT SR 202 widening project, which includes ITS implementation, will greatly improve traffic progression along the corridors serving commuters traveling to/from SR 520 and Redmond Urban Center from the north and east.

6	<p>Project location:</p> <p>100th Ave NE between NE 132nd Street and NE 145th Street, 100th Ave NE between NE 132nd and NE 124th City of Kirkland Fiber connection, Juanita-Woodinville Way between 100th Ave NE and NE 160th Street, NE 160th Street between Juanita-Woodinville Way and 124th Ave NE, 277th/272nd between SR-99 and 55th Ave S, City of Redmond City Hall, City of Kent City Hall, King County Traffic Control Center</p> <p>a. County(ies) in which project is located: King</p> <p>Answer the following questions if applicable:</p> <p>b. Crossroad/landmark nearest to beginning of project (identify landmark if no crossroad): Various</p> <p>c. Crossroad/landmark nearest to end of project (identify landmark if no crossroad): Various</p>
7	<p>Map: 1. Include a legible 8½" x 11" project map with the completed application form.. 2. Include a legible vicinity map with the completed application form (can be smaller than 8½" x 11").</p> <p>Note: If unable to send the map electronically, mail a copy on diskette and provide a paper copy by fax or mail.</p>
8	<p>Federal functional classification code (Please select <u>only one</u> code using the table below)</p> <p>For assistance determining functional classification, contact Stephanie Rossi at 206-587-5118 or srossi@psrc.org.</p> <p>Important: A roadway must be <u>approved</u> on the federally classified roadway system before projects on it may use federal transportation funds (this includes proposed new facilities). Projects on a roadway with a functional classification of 09, 19, 29, or 39 are not eligible to use federal transportation funds unless they are one of the exceptions listed below. If your project is an exception, identify its functional class code as "00".</p> <p><u>Examples of exceptions:</u></p> <ul style="list-style-type: none"> • Any bicycle and/or pedestrian project. • Projects not on a roadway and using CMAQ or other funds • Any transit project, including equipment purchase and park-and-ride lot projects.

<p style="text-align: center;">Rural Functional Classifications "Under 5,000 population"</p> <p>(Outside federal-aid urbanized and federal-aid urban areas)</p> <p><input type="checkbox"/> 00 Exception</p> <p><input type="checkbox"/> 01 Principal Arterial - Interstate</p> <p><input type="checkbox"/> 02 Principal Arterial</p> <p><input type="checkbox"/> 06 Minor Arterial</p> <p><input type="checkbox"/> 07 Major Collector</p> <p><input type="checkbox"/> 08 Minor Collector</p> <p><input type="checkbox"/> 09 Local Access</p> <p><input type="checkbox"/> 21 Proposed Principal Arterial – Interstate</p> <p><input type="checkbox"/> 22 Proposed Principal Arterial</p> <p><input type="checkbox"/> 26 Proposed Minor Arterial</p> <p><input type="checkbox"/> 27 Proposed Major Collector</p> <p><input type="checkbox"/> 28 Proposed Minor Collector</p> <p><input type="checkbox"/> 29 Proposed Local Access</p>	<p style="text-align: center;">Urban Functional Classifications "Over 5,000 population"</p> <p>(Inside federal-aid urbanized and federal-aid urban areas)</p> <p><input type="checkbox"/> 00 Exception</p> <p><input type="checkbox"/> 11 Principal Arterial – Interstate</p> <p><input type="checkbox"/> 12 Principal Arterial – Expressway</p> <p><input checked="" type="checkbox"/> 14 Principal Arterial</p> <p><input checked="" type="checkbox"/> 16 Minor Arterial</p> <p><input type="checkbox"/> 17 Collector</p> <p><input type="checkbox"/> 19 Local Access</p> <p><input type="checkbox"/> 31 Proposed Principal Arterial – Interstate</p> <p><input type="checkbox"/> 32 Proposed Principal Arterial – Expressway</p> <p><input type="checkbox"/> 34 Proposed Principal Arterial</p> <p><input type="checkbox"/> 36 Proposed Minor Arterial</p> <p><input type="checkbox"/> 37 Proposed Collector</p> <p><input type="checkbox"/> 39 Proposed Local Access</p>
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PLAN CONSISTENCY INFORMATION

Note: Cities, towns, and counties seeking federal funds managed by the PSRC may submit an application only if their comprehensive plan has been certified by the PSRC. All other agencies (e.g., transit agencies, WSDOT, tribal nations, etc.) must show that their project is consistent with the applicable city and/or county comprehensive plan(s), and with *VISION 2020* and *Destination 2030*, the central Puget Sound region's Metropolitan Transportation Plan. For questions on consistency and certification, contact Rocky Piro at 206-464-6360 or rpiro@psrc.org. For questions regarding centers, contact Ben Bakkenta at 206-464-5372 or bbakkenta@psrc.org.

9 Consistency with adopted *VISION 2020* and *Destination 2030* (Metropolitan Transportation Plan)

Note: The questions in this section must be answered by all applicants. If you need assistance, please contact staff at the local jurisdiction in which the project is located. Information on the current certification status of a local plan is available on the PSRC's Web site at www.psrc.org/projects/planreview/ppr_status.htm. To obtain copies of the adopted *VISION 2020* or *Destination 2030* documents, please contact the PSRC's Information Center at 206-464-7532 or infoctr@psrc.org.

a. Indicate the current certification status of the local comprehensive plan's transportation element. Note: Select only one from the drop down box below and provide the most recent date of certification action. If you select "Not Certified," leave the date field blank.

- Certification Status: Certified
- Date of certification action (mm/dd/yy): 1/26/2006

b. Please check all boxes that apply to the project's location. If portions of the project are located in more than one of the locations listed, please check all appropriate boxes.

☐ The project is located outside the designated urban growth area.
(Refer to <http://www.psrc.org/projects/tip/applications/reference.htm> for more information.)

☒ The project is located within the designated urban growth area.

☒ The project is located within a formally designated regional growth center. (Please identify the regional growth and/or manufacturing/industrial center in the space below; refer to <http://www.psrc.org/projects/monitoring/rqc.htm> for more information.)

Designated urban centers of the cities of Redmond, Kent

c. Is the project specifically identified in a local comprehensive plan?

- ☒ Yes. Indicate the (1) plan name, (2) relevant section(s), and (3) page number where it can be found:
2006 King County Comprehensive Plan, Transportation Element, 2006 Department of Transportation – Road Services Capital Improvement Program, pages – 7, 9, 11 & 72.
- ☐ No. Describe how the project is consistent with the applicable local comprehensive plan, citing specific local policies and provisions the project supports. Please include the actual text of all relevant policies or information on where it can be found, e.g. the policy document name and page number.

REGIONAL PROJECT EVALUATION

Important: Projects will be evaluated and scored based on the information provided in Parts 1 and 2 that follow. Refer to the "Regional Project Evaluation Criteria" (Section 3 of the STP/CMAQ Regional Competition Call for Projects) before completing these sections of the application for guidance, examples, and details on scoring.

Instructions:

- Part 1: Choose the one project category that best fits your project and complete the corresponding section A, B, or C.
- Part 2: Complete all three sections in Part 2 (sections D, E, and F).

Part 1: Category Specific Questions (50 Points)

10. Select one of the following three categories that best fits your project and follow the corresponding instructions:

- ☐ Designated Urban Center: Complete section A (question 11) and proceed directly to Part 2 (questions 14-17).
- ☐ Manufacturing/Industrial Center: Complete section B (question 12) and proceed directly to Part 2 (questions 14-17).
- ☒ Connecting Corridors: Complete section C (question 13) and proceed directly to Part 2 (questions 14-17).

Note: Please refer to Attachment 6 of the Policy Framework (Section 2 of the STP/CMAQ Regional Competition Call for Projects) for a map of designated urban and manufacturing/industrial centers. An updated map is also available on the PSRC website at <http://www.psrc.org/projects/tip/index.htm>. For questions regarding the designation of a specific center, contact Ben Bakkenta at 206-464-5372 or bbakkenta@psrc.org. Information on the 2005 adopted Regional Economic Strategy and the five targeted industry clusters, including definitions and maps of the clusters, may be found on the Prosperity Partnership website at <http://www.prosperitypartnership.org/clusters/index.htm>. For questions regarding these topics, contact Jeff Raker at 206-464-6179 or jraker@psrc.org.

A. Designated Urban Centers (50 Points)

Instructions: Complete this section if you selected "Designated Urban Centers" in question 10, and then proceed directly to Part 2 (questions 14-17). Do not complete questions 12 or 13.

11. Please explain how your project addresses the following:

- How will the project help the Urban Center to develop in a manner consistent with adopted policies or comprehensive plans? Describe how the project will support activity in the Urban Center, implement any development plans for the center, and enhance the Center's sense of place. Please provide a citation and copy of the appropriate page(s) from the plan or policies with your application.
- Will the project create, sustain or provide benefits to a targeted industry cluster business within a designated urban center? Please describe the business(es) that will benefit from the project; descriptions should indicate the scale and nature of the business(es), as well as its market and workforce transportation needs. Benefits could be demonstrated through access and travel time improvements for employees, customers and freight movement.
- Describe the impact the project will have on the Urban Center. Will the project remedy an existing or anticipated problem (e.g., congestion, incomplete sidewalk system, inadequate transit service or facilities, etc.)? Will the project benefit a large number or wide variety of users (including commuters, residents, commercial users, those groups identified in the presidential Executive Orders for Environmental Justice¹ and/or areas experiencing high levels of unemployment or chronic underemployment)?

¹ The President's Order for Environmental Justice states "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations." For more information, refer to the PSRC's 2003 Environmental Justice Demographic

- Will the project provide access to a major destination or significantly improve circulation within the Urban Center? For projects with a parking component, describe how it will be compatible with a pedestrian-oriented environment.

B. Manufacturing/Industrial Centers (50 Points)

Instructions: Complete this section if you selected "Manufacturing/Industrial Centers" in question 10, and then proceed directly to Part 2 (questions 14-17). Do not complete questions 11 or 13.

12. Please explain how your project addresses the following:

- How does the project result in time savings for moving freight and goods?
- Indicate whether the project focuses on addressing a physical gap or removing a barrier that is problematic for freight and goods movement.
- How does the project contribute to achieving a more "seamless" system of moving freight and goods by reducing modal conflicts, such as between freight trains and trucks, in a safe and efficient manner?
- How does the project help to improve the circulation and movement of people and goods to various buildings and/or employment sites?
- Does the project or program contribute to transportation demand management and commute trip reduction opportunities? Please describe.
- Describe how the investment results in more reliable travel for various user groups (including employees, customers, modal carriers, those identified in the presidential Executive Orders for Environmental Justice² and/or areas experiencing high levels of unemployment or chronic underemployment).?
- Will the project create, sustain or provide benefits to a targeted industry cluster business within a designated manufacturing/industrial center? Please describe the business(es) that will benefit from the project; descriptions should indicate the scale and nature of the business(es), as well as its market and workforce transportation needs. Benefits could be demonstrated through access and travel time improvements for employees, customers and freight movement.

C. Connecting Corridors (50 Points)

Instructions: Complete this section if you selected "Connecting Corridors" in question 10, and then proceed directly to Part 2 (questions 14-17). Do not complete questions 11 or 12.

13. Please explain how your project addresses the following:

- Describe how the investment in the corridor improves access or directly benefits a center(s) by providing a range of travel modes and by serving multiple user groups (including commuters, residents, commercial users, those groups identified in the presidential Executive Orders for Environmental Justice³ and/or areas experiencing high levels of unemployment or chronic underemployment).
- Will the project create, sustain or provide benefits to a targeted industry cluster business within a designated urban or manufacturing/industrial center? Please describe the business(es) that will benefit from the project; descriptions should indicate the scale and nature of the business(es), as well as its market and workforce transportation needs. Benefits could be demonstrated through access and travel time improvements for employees, customers and freight movement.
- Describe how the project improves a corridor in logical segments, thereby preventing missing links or gaps.
- Describe how the project creates more reliable and efficient travel flows along the corridor by filling missing links or removing barriers.
- Describe how the improvements create long-term sustainable solutions and improve the system as a whole.
- Describe how this project improves safety and/or reduces modal conflict.

South 272nd/277th Street ITS:

This project provides ITS improvements to an arterial that links Pacific Highway South, I-5, SR 167 with the cities of Federal Way, Seatac, Kent and Auburn. The 272nd/277th Street corridor connects to the Auburn ITS project and the King County South 277th Street ITS at SR 167 on the east end and the Pacific Highway South widening project on the west end. Both projects contain fiber optic cable for signal interconnect and high speed communication between centers. This is a missing link to the Kent/Auburn Valley to provide a high-speed connection between King County,

Profile available on the PSRC website at <http://www.psrc.org/datapubs/ej/index.htm>, or contact the PSRC Information Center at 206-464-7532 or infoctr@psrc.org.

² see footnote above

³ see footnote above

WSDOT, and the Cities of Kent and Auburn. This fiber optic cable connection will provide signal interconnect and video along the corridor, reducing travel times, improving incident response, reducing accidents, reducing vehicle emissions, and providing traffic information to the traveling public. The high speed connection between centers will allow for data and video sharing between jurisdictions as well as the ability to share signal operation of the corridor, which can be operated from a remote location.

This ITS project will improve travel times through the corridor by 14% in the build out year and more importantly allow for more reliable and efficient travel flows. The operator of the system will have the ability to view video and real time data to adjust signal timing throughout the corridor in the case of an incident on the corridor or on an adjacent major route that may use the 272nd/277th Street corridor as a detour route. The video will also allow emergency management centers to reroute emergency vehicles, reducing incident response.

The 272nd/277th Street ITS project will create long-term sustainable solutions by providing a much needed fiber link and ITS equipment between the partnering agencies and between the corridor and the operating agency. With the corridor at, what may be, its ultimate build-out with completion of the 277th widening project between West Valley Hwy and Auburn Way, the ITS project will allow for additional movement of vehicles and the ability to expand the ITS features as they become necessary. Such features may include freight mobility market packages, Transit signal priority, and variable message signs. The majority of the new signal controllers and signal control central systems have the ability to allow for adaptive signal control. This is a corridor that could function well using adaptive timing which allows the computer program to adjust signal timings based on real time traffic flow.

Accidents along the corridor will decrease due to a reduction in vehicle stops and improved vehicle progression through the corridor. It is anticipated that the cost savings attributed to reduced accidents is approximately \$900,000 annually. This is based on interconnected signals and signal modification throughout the 272nd/277th Street corridor. The accident benefit analysis does not measure the benefit from reduction in secondary accidents that occur due to congestion caused by incidents. The ability to improve traffic flow during an incident will reduce the secondary accidents, further improving the safety for vehicular traffic through the corridor.

100th Ave NE ITS/ Juanita-Woodinville Way/NE 160th St. ITS Projects:

The 100th Ave NE corridor is one of few direct north/south arterials that gives an alternative to I-405 and extends from SR 520 to Bothell Way (SR 522). This ITS project will lay the foundation for future extension of ITS features along the entire route serving Bellevue, Kirkland and Kenmore. This ITS project is the first link to be constructed along the route. This is a logical link to construct at this time due to its ability to use existing ITS infrastructure to communicate between the corridor and King County Traffic Control Center in downtown Seattle by connecting into the NE 124th St. ITS project.

Juanita-Woodinville Way/NE 160th St corridor serves the Brickyard Park and Ride lot and connects into the NE 160th St. I-405 ramps. The project consists of installing transit signal priority near the Park and Ride lot as deemed beneficial by King County Metro Transit. There are 6 signals in close proximity to each other in the vicinity of I-405 ramps that will benefit from the interconnection and remote monitoring and operation.

These projects will be integrated with the NE 124th St. ITS, completed in May of 2005, and complete a looped fiber communication system. These projects also provide choices to the commuting public by interconnecting two routes with access to and from I-405 and the Totem Lake Industrial Area and providing access to the Brickyard Park and Ride Lot. With interconnected and synchronized signals running on the same Central Operating System, the engineer can remotely revise timing to signals along all three corridors during an incident or unexpected event on I-405 or one of the arterials in the area.

The 100th Ave NE ITS/ Juanita-Woodinville Way/NE 160th St. ITS projects will create long-term sustainable solutions by providing the groundwork for continued expansion of ITS technology along the closest north/south arterial corridor to I-405 that connects to the Bellevue urban center and provides commuter and consumer access to this center. Additional projects can connect directly to this project at NE 124th St. and continue the communication and signal interconnection to the south.

Avondale Road ITS:

The Avondale Road corridor extends from SR 520 to Woodinville Duvall Road. It is a very congested arterial that serves as a commuting route to residents of northeastern King County and Southeastern Snohomish County leading into the Redmond Urban Center and the surrounding economic cluster development areas. This corridor funnels traffic to and from SR 520 and SR 202 to destinations in Redmond, Bellevue, Seattle and other major employment Centers. This project will link into an existing funded ITS project that is scheduled for construction in late 2006. The funded project provides ITS equipment between the WSDOT fiber hub at SR 202/SR520 and Novelty Hill Road. This ITS project will continue ITS installation between Novelty Hill Road and Woodinville Duvall Road.

This will complete a very important fiber link and communication link to Woodinville Duvall Road, which is a designated Rural Connector Route within King County. A very high volume of traffic uses the Woodinville Duvall/Avondale Road routes to commute to and from the Redmond Urban Center and various economic clusters throughout the Redmond area. The ability to interconnect signals and monitor traffic to and from the Avondale/SR 520 interchange will improve travel times for the workforce to the Redmond economic clusters that predominately include Information Technology and Life Sciences clusters.

The ability to move traffic to/from the north and east edge of the City of Redmond will improve economic development in the Urban Center by moving commuters to/from work, clearing the traffic congestion for work related trips, and improve travel time reliability for customers to/from retail centers providing for ease of trip and making the destination more desirable.

The Avondale Road ITS project will create long-term sustainable solutions by completing a vital ITS connection on a high use commuter route between SR 520 and Woodinville Duvall. It will also lay the groundwork for continued expansion of ITS technology along routes leading into Avondale Road such as NE 132nd St to the west, which provides access to the Totem Lake Area and Woodinville Duvall Road, providing access to rapidly increasing residential development in Southeast Snohomish County. Additional ITS expansion along Avondale Road includes Variable Message Signs to provide alternate route information and weather stations to provide road conditions to the traveling public and maintenance crews. As ITS expands to the higher speed arterial routes such as portions of Avondale and Woodinville Duvall Road, safety features such as curve warning signs, variable speed signs, and intersection decision zone technology may become appropriate to decrease higher speed, more severe accidents.

All four projects are expanding existing ITS systems and providing for future expansion. ITS systems are typically built link by link as resources become available. One arterial that is equipped with ITS devices can help the travel times of a specific area, but as these ITS systems expand, the ability of traffic engineers to operate arterials at a regional level will become increasingly achievable.

PART 2: QUESTIONS FOR ALL PROJECTS (50 Points)

Instructions: Once Section A, B, or C in Part 1 has been completed, complete all of Part 2 (questions 14-17).

D. Project Readiness/Financial Plan (30 Points STP, 10 Points CMAQ)

Introduction: Two primary tools will be used to obtain information needed to judge a project's ability to proceed: responses to the project readiness (question 14) and financial plan (question 15) sections below. The primary objective of the evaluation is to determine if a sponsor has assembled all of the funding needed to complete the project or phase(s), and when the sponsor will be ready to obligate the requested regional funding. All questions must be completely and accurately filled out in order for this information to be properly assessed. The information will be used to determine:

- When the sponsor can complete all prerequisites needed to obligate the project's requested PSRC funding.
- When the sponsor plans to obligate requested PSRC funding.
- The amount and source of secured funding for the project.
- The amount and source of reasonably expected but unsecured funding for the project.
- If PSRC's federal funds will complete the project or a phase of the project.

Note: The standard PSRC definitions will apply for determining when funding is "secured" or "reasonably expected to be secured." These definitions are included in Section 5 of the STP/CMAQ Regional Competition Call for Projects.

14. Project Readiness: Please fill out the questions below if your project is requesting funds for a Right of Way (ROW) and/or Construction (CN) phase.

PSRC recognizes that the complexity of some projects can trigger a variety of prerequisites that must be satisfied before STP and CMAQ funding is typically eligible to obligate. These questions are designed to identify these requirements and assist sponsors to:

- Identify which requirements apply to their specific project.
- Identify which requirements have already been satisfied at time of application.
- Provide an explanation and realistic completion date for all requirements not yet completed.

Important instructions: For question 14A below, select one of the three options from the drop down list for all items that apply at the time of submission of this application. These items are based on the documentation requirements for obligation of federal funds. For any item where "Item not yet completed" is selected, and for any additional requirements pertaining to the project, provide details in question 14B, including the estimated schedule for completion.

14A. Check all items that apply below. Note: if no ROW is required for the project, select "not needed" for sections b through g.

Not yet completed a. Final FHWA or FTA approval of environmental documents including:

(select one) - BA Concurrence: NMFS, U.S. Fish & Wildlife, WSDOT.

(select one) - Section 106 Concurrence.

(select one) - FHWA/FTA Environmental Classification Summary Checklist (or EA or EIS).

Not needed b. True Cost Estimate for Right of Way.

Not needed c. Right of Way Plans (stamped).

Not needed d. Relocation Plan (if applicable).

Not needed e. Right of way certification.

Not needed f. Certification Audit by WSDOT R/W Analyst.

Not needed g. Relocation Certification, if applicable.

Not needed - Certification Audit by WSDOT of Relocation Process, if applicable.

Not yet completed h. Engineer's Estimate.

Not yet completed i. All environmental permits obtained such as Army Corps of Engineers Permit, HPA, etc.

14B. Additional information: include details on any items above that are not yet completed and provide an estimated schedule; please provide any additional information as appropriate.

a. Final FHWA or FTA approval of environmental documents will occur prior to 100% design: ITS projects are typically categorically exempt from BA and Section 106 concurrence and EA or EIS. An Environmental Checklist will be completed between the 30% and 70% plan design stage. Typically ITS projects are designed to have no impacts to environmentally sensitive areas and are exempt from SEPA. Please see below schedule.

h. A draft engineer's estimate will be completed at 70% design phase and the final at 100% design. Please see below schedule:

j. ITS projects typically do not require environmental permits as they are not impacting any environmentally sensitive areas. The environmental checklist will be completed between 30% and 70% design. Please see below schedule

15. Financial plan: Please fill out Tables A-D below and corresponding questions E-F. The purpose of the tables and questions is to allow sponsors to fully document their project's financial plan and schedule. Tables A, B, and C build upon one another to provide the estimated cost of each phase as well as a project's total cost (Table D). The tables require sponsors to list the federal funds being requested from the Regional Competition (Table A), as well as ALL other sources of secured (Table B) and unsecured funds (Table C) needed to complete the project.

Guidelines:

- All requested information must be provided to earn maximum points.
- Provide financial information for all funding types in every applicable phase, and use a separate row for each funding source.
- Totals of federal and other funds listed in Tables A, B, and C should equal the total project cost in Table D.
- Funding commitment letters must be provided for all financial partners.

Required Match: A minimum of 13.5% match is required for both STP and CMAQ funds. Sponsors of projects awarded funds through this competition will be required to provide information on these matching funds at a later date.

Table A: Funding Requested from Regional Competition

Phase	Estimated Obligation Date by Phase (mm/dd/yy)	PSRC Federal Funding Source (enter either STP or CMAQ; choose only one)	PSRC Federal Funds Amount
PE	12/07-12/08	CMAQ	\$1,620,909
CN	12/08-10/09	CMAQ	\$6,483,638
			\$
Totals:			\$8,104,547

Table B: Existing Secured Funding

Phase	Estimated Obligation* date by Phase (mm/dd/yy)	Source	Amount
PE	12/31/2007	FY05 Federal Discretionary	\$286,923
PE	12/31/2007	KC Road Fund	\$537,540
CN	12/31/2008	FY05 Federal Discretionary	\$1,147,693
CN	12/31/2008	KC Road Funds	\$1,301,177
			\$
TOTAL:			\$3,273,333

*For tables B or C "obligation" may be defined as expenditure or other commitment of funds. For assistance, please refer to "Definitions for Secured and Reasonably Expected to be Secured Funding" in Section 5 of the Call for Projects.

Table C: Needed future funding (unsecured) Note: do not include the grant funds requested in Table A

Phase	Estimated Obligation* date by Phase (mm/dd/yy)	Source	Amount
			\$
			\$
			\$
			\$
			\$
TOTAL:			\$

*For tables B or C "obligation" may be defined as expenditure or other commitment of funds. For assistance, please refer to "Definitions for Secured and Reasonably Expected to be Secured Funding" in Section 5 of the Call for Projects.

Table D: Total Project Cost (Please provide the total estimated cost and scheduled completed date for each phase of the project.)

Phase	Total estimated cost	Phase	Scheduled completion date (mm/dd/yy)
Planning:	\$	Planning:	N/A
Preliminary Engineering/Design:	\$2,445,373	Preliminary Engineering/Design:	8/1/2009
Right of Way:	\$	Right of Way:	
Construction:	\$8,932,507	Construction:	5/1/2010
Other (Specify) :	\$	Other (specify) :	
Total Project Cost:	\$11,377,880	Estimated date of completion (i.e. open for use)	5/1/2010

E. Identify the project phases (PE, ROW, CN, etc.) that will be fully completed if requested funding is obtained:

This project will complete PE and CN, no ROW is required.

F. If unable to completely fill out Table D (Total Project Cost): Use the space below to explain the nature of any project for which the total project cost is presently unknown. For example, a project may study the merits/costs of various routes or construction techniques and, consequently, the total project costs won't be determined until the study is complete.

E. Air Quality (20 Points STP, 40 Points CMAQ)

16. Describe how your project will reduce emissions. Include a discussion of the population served by the project – who will benefit, where, and over what time period. Projects may have the potential to reduce emissions in a variety of ways; depending on the type of project, please provide the requested information if your project contains the elements listed below:

- Diesel retrofits: describe the types and numbers of vehicles, vessels, or equipment involved, how often they are used, how much fuel is consumed annually, where they are used and when the retrofits will occur.
- Roadway capacity (general purpose and high occupancy vehicles): describe the roadway and travel conditions before and after the proposed project, including average daily traffic and travel speeds; describe the potential for multimodal connections, shorter vehicle trips, etc.
- Transit (park and ride lots, new or expanded transit service, transit amenities, etc.): what is the current transit ridership in the project area; what are the current transit routes serving the project area; if a park-and-ride lot, how many stalls are being added; describe how the amenities (or other components of the project) are expected to encourage new transit ridership and shift travel from single occupant vehicles to multimodal options; what is the average trip length for a new rider?
- Bicycle and/or pedestrian facilities: what is the length of the facility; what are the connections to other nonmotorized facilities and to the larger nonmotorized system; describe the expected travel shed (i.e., land use, population surrounding the project).
- Signalization, other ITS improvements: describe the existing conditions in the area (i.e., level of service, average daily traffic, etc.); describe how the project is expected to improve traffic flow (increase speed, reduce idling, remove accidents, etc.); is there a significant amount of truck traffic (i.e. freight movement) on the facility? does the project improve traffic flow for particular modes, e.g. HOVs, or types of vehicles, e.g. freight trucks?
- Alternative fuels/vehicles: describe the change in fuel or vehicle technology; how many vehicles are affected; what are the current conditions?
- Other: describe how your project has the potential to reduce emissions through technology, improved management or other means, e.g. no idling signage & enforcement, auxiliary power units to operate heating, cooling & communications equipment, truck stop electrification, etc.

The ITS projects proposed include signal interconnect, signal synchronization, real time video and data feeds, some TSP, and remote access to signal operation. The results of these improvements include improved traffic flow, improved speed and reliability of transit and a reduction in travel times for all vehicular modes. The benefits of these

improvements will be a reduction in emissions, an increase in transit ridership and a reduction in the amount of idling vehicles.

Within the areas affected by this project, Auburn urban center, 272nd/277th Corridor, Kent urban center, Redmond urban center, Avondale Road and Juanita-Woodinville/NE 160th Street corridor there are six park and ride lots and two Sound Transit Commuter Rail stations.

These improvements will build upon and expand the existing work begin done in these areas to improve transit speed and reliability. The South 272nd/277th Street ITS, 100th Ave NE and Juanita-Woodinville/NE 160th St ITS projects will integrate TSP into the ITS projects and provide a high-speed connection to King County Metro Transit via King County's Traffic Control Center (KCTCC). This will allow Metro Transit the ability to monitor the use and effectiveness of TSP through the KCTCC central system. The Metro Transit Division is also currently designing a Transit Signal Priority (TSP) project for the 272nd/I-5 ramps and TSP is also being installed along Pacific Highway South north of South 272nd Street. Within the City of Redmond addition of optimizing of the traffic flow on the corridors will lead to a reduction in VMT as SOV's convert to transit. Travel time for all motorized roadway users will decrease as trips are made by transit rather than SOV's reducing the number of vehicles & corridor congestion.

The 272nd/277th Street ITS project will improve the flow of traffic through the corridor by interconnecting signals, providing real time video feeds to the operating engineer and allow for remote real time signal operation as needed during incidents and events. The signal interconnect is shown to reduce the number of stops and idling in the PM peak hour along the corridor by 14% in the 2006 buildout year. The total vehicle stops and idling during the PM peak hour will reduce from 28,000 to 24,100. The 2020 study shows total vehicle stops during PM peak reduced by 20% from 35,150 to 28,100. The emissions and fuel consumption reductions due to the improved travel times and reduced stops throughout the corridor will amount to approximately \$107,000 annually in fuel savings and public health cost savings. The emissions were shown to have a reduction annually of 3.5 tons of carbon monoxide, 0.64 tons of nitrogen oxides, and 1.33 tons of petroleum hydrocarbons. The use of signal interconnect, signal synchronization, and communication connection to Redmond's Traffic Management Center will also reduce delay, travel time, idling, and fuel consumption along the Avondale corridor.

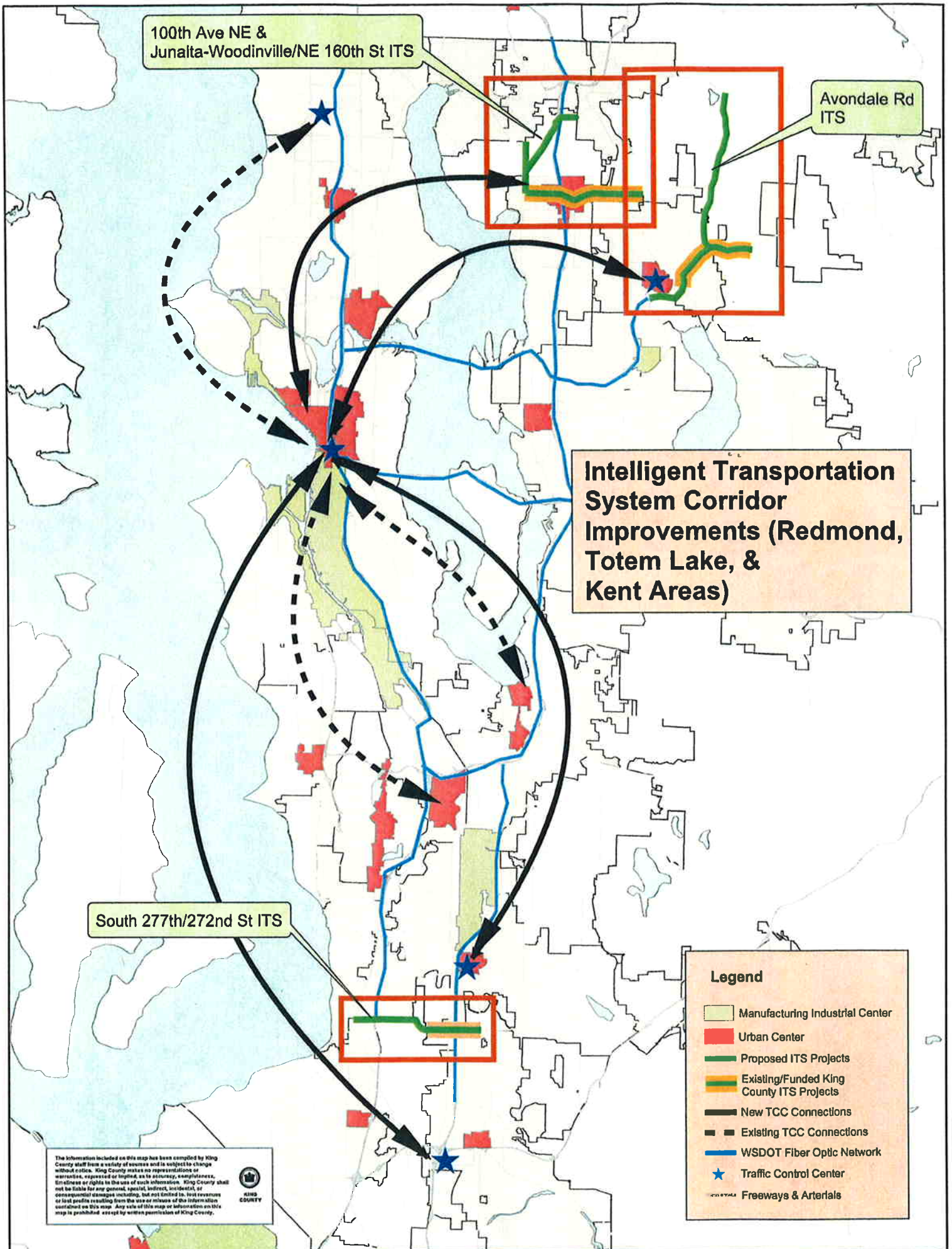
System interconnection between jurisdictions will allow incident information from all systems to be monitored at the Traffic Management/Control Centers. This sharing of operational information will allow coordination to provide an alternative route for vehicles to by-pass the incident and adjust signals timings to accommodate the added volumes on the detour route. Incident management along the State system and the King County and Cities of Auburn, Redmond, and Kent arterials will result in fewer traffic delays and will minimize the negative air quality impacts of idling cars.

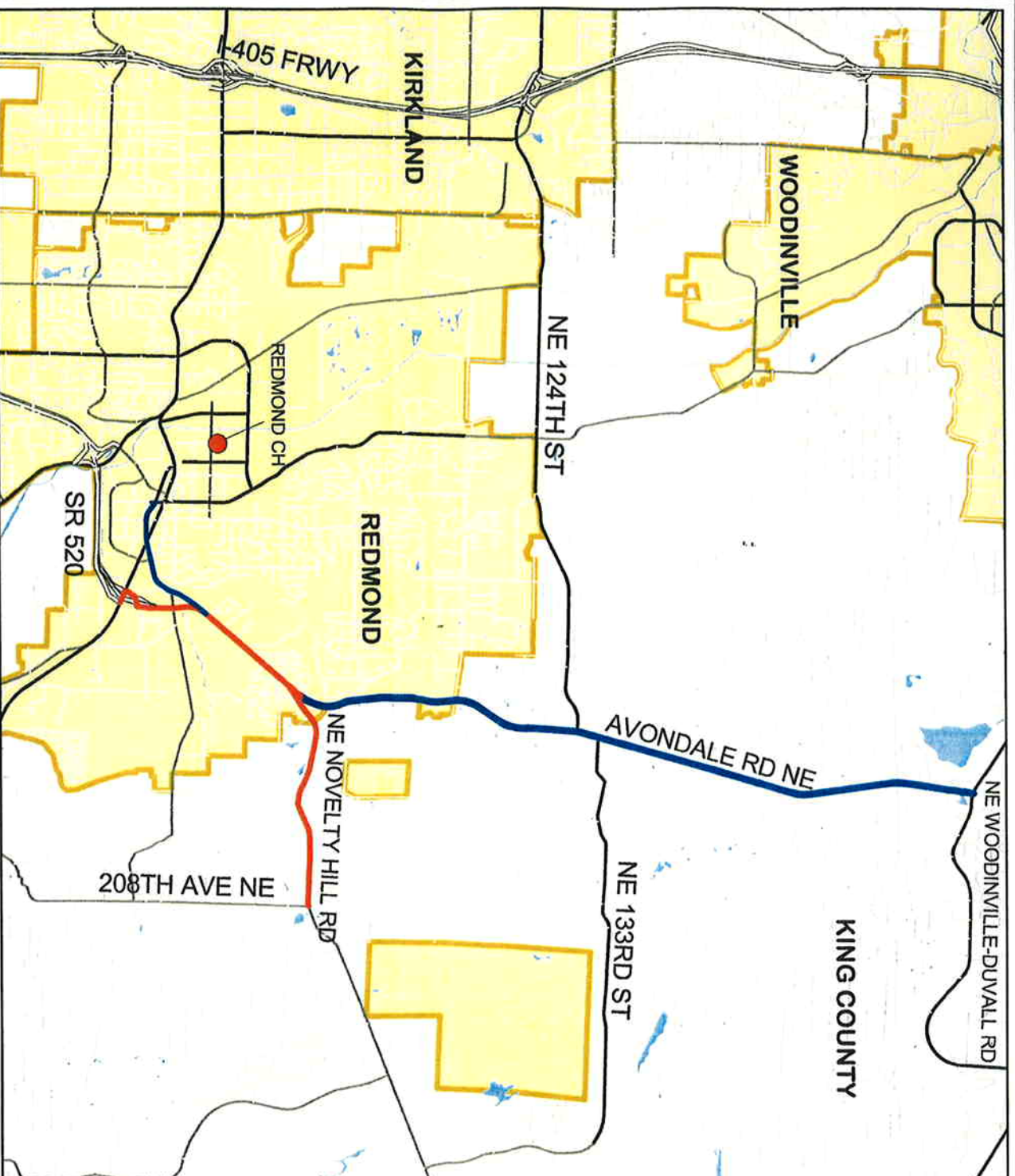
F. Other Considerations (No Points)

17. Please describe any additional aspects of your project not requested in the application that could be relevant to the final project recommendation and decision-making process, particularly those relating to the support of the centers and connecting corridors policy focus. Note: No points will be given to this section.

The four projects included in the King County Intelligent Transportation System Corridor Improvements are expanding existing ITS systems and providing for future expansion. ITS systems are typically built link by link as resources become available. One arterial that is equipped with ITS devices can help the travel times of a specific area, but as these ITS systems expand, the ability of traffic engineers to operate arterials at a regional level will become increasingly achievable.

King County is in a unique position to work together with all agencies within King County to implement ITS features on arterials that travel within more than one jurisdiction. The corridors proposed in this application do travel within King County and another jurisdiction. With this type of project, the County is striving to provide interconnectivity between agencies that operate arterials throughout King County





Legend

- Avondale ITS
- Avondale/Nov ITS (Funded)
- Freeway
- Principal
- Minor
- Collector
- Local
- County Boundary
- Open Water
- Cities

April 11, 2006

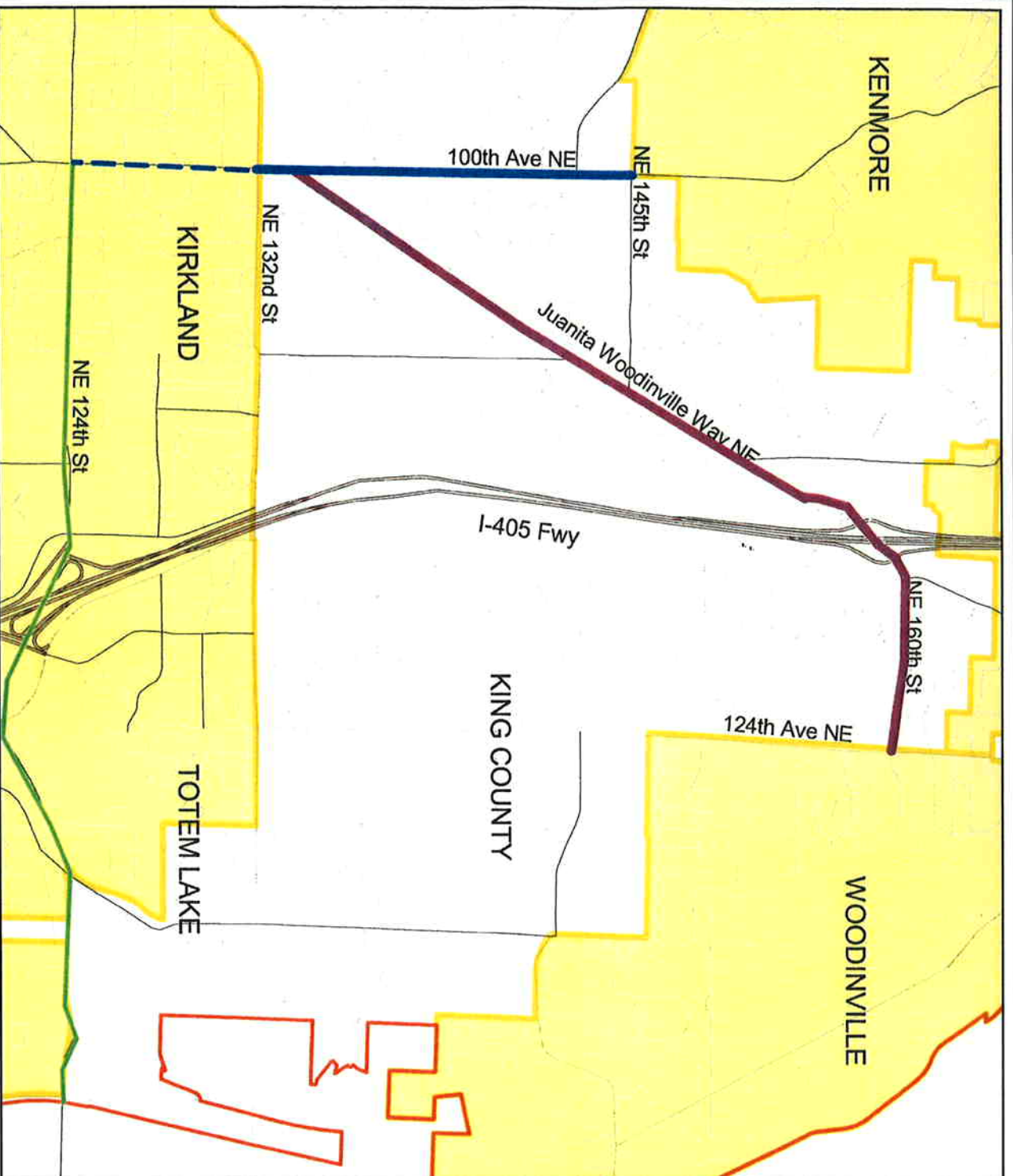
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AVONDALE ROAD ITS

2006 PSRC GRANT APPLICATION, KING COUNTY



Legend

- 100th Ave NE ITS
- 100th Ave NE ITS
- Fiber to NE 124th ITS
- Juanita-Woodinville/NE 160th St. ITS
- NE 124th St. ITS (Existing)
- KC Urban Growth Area
- Freeway
- Primary
- Collector
- Minor
- Local
- Washington counties
- Open Water
- Cities

April 11, 2006

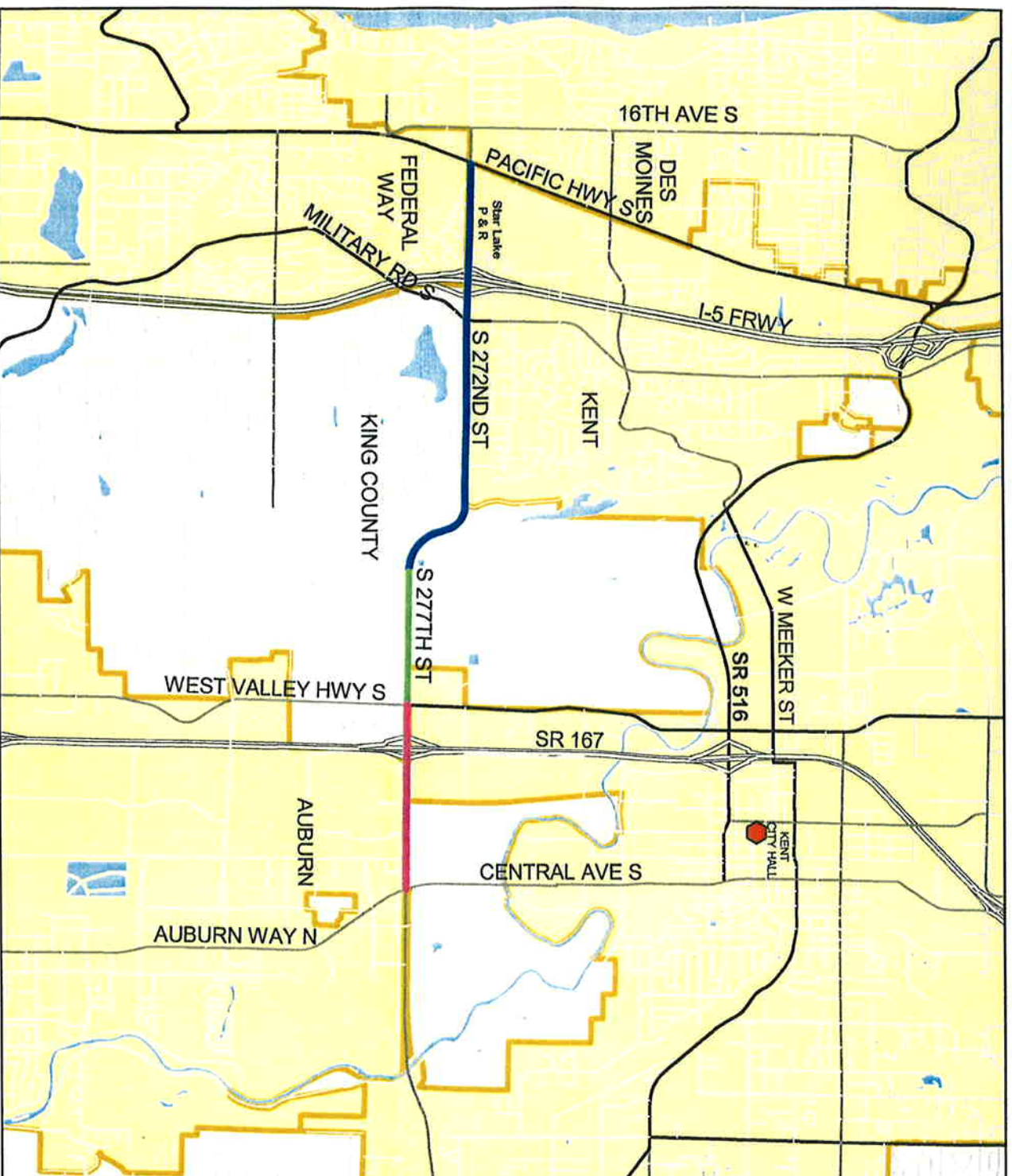
0.05 0 0.05 0.1 0.15 0.2 0.25 Miles



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100TH AVE NE AND JUANITA-WOODINVILLE/NE 160TH ITS 2006 PSRC GRANT APPLICATION, KING COUNTY



Legend

- ↗ S 272nd-277th ITS
- ↗ 277th ITS (funded)
- ↗ Auburn ITS (funded)
- ↗ Freeway
- ↗ Principal
- ↗ Minor
- ↗ Collector
- ↗ Local
- ↗ County Boundary
- ↗ Open Water
- ↗ Cities

0.2 0 0.2 0.4 0.6 0.8 1 Miles

April 11, 2006

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King County

SOUTH 272ND/277TH ST. ITS

2006 PSRC GRANT APPLICATION, KING COUNTY